

WHAT IS CLAIMED IS:

1. A clothes iron appliance comprising:

a water reservoir;

a steam chamber; and

5 an electro-osmotic pump comprising a porous body
disposed to pump water from said reservoir to said steam
chamber.

2. The appliance of claim 1 wherein said porous body has a
10 thickness dimension in the direction in which water is pumped,
and a cross-section perpendicular to the thickness dimension,
and the cross-section has dimensions greater than the
thickness dimension.

15 3. The appliance of claim 1, wherein said porous body is
composed of a bed composed of fine grains.

4. The appliance of claim 3 wherein the fine grains are
constituted by alluvial sand having a grain size not greater
20 than 0.2mm.

5. The appliance of claim 3 wherein the fine grains are of a
siliceous material.

6. The appliance of claim 3 wherein the fine grains include grains of an ion exchange resin.

7. The appliance of claim 1 wherein said pump further
5 comprises an enclosure made of plastic material and containing said porous body, and two electrodes placed in electrical communication with respective opposite faces of said porous body.

10 8. The appliance of claim 7 wherein each of said electrodes is made of stainless steel or of titanium and is provided with through holes.

9. The alliance of claim 7, wherein said pump further
15 comprises porous membranes interposed between said body and said electrodes.

10. The appliance of claim 1 wherein said appliance further comprises a source of direct current for said pump, said
20 source comprising a transformer or a switch mode power supply having a galvanic isolation.

11. The appliance of claim 1 wherein said pump is constituted by a cassette which is installed in said reservoir in an

easily removable manner, and said appliance further comprises a conduit connected to convey water from an outlet of said pump to an inlet of said steam chamber.

5 12. The appliance of claim 11 wherein said appliance further comprises a shunt provided with a calibrated orifice and connected between a point of said conduit that is above said steam chamber and a point in an upper region of said reservoir.

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13. The appliance of claim 11, further comprising a spray nozzle and a 3-way valve connected between said conduit and said nozzle for supplying water from said pump to said nozzle.